

Rec'd PCT/PCTO 23 DEC 2004

519,368

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
8 January 2004 (08.01.2004)

PCT

(10) International Publication Number
WO 2004/002382 A1

(51) International Patent Classification⁷:

A61F 9/01

(74) Agent: VOSSIUS & PARTNER; Siebertstrasse 4, 81675
Munich (DE).

(21) International Application Number:

PCT/EP2003/006778

(22) International Filing Date: 26 June 2003 (26.06.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data/
60/392,510 27 June 2002 (27.06.2002) US

(71) Applicant (for all designated States except US): TECH-NOVISION GMBH GESELLSCHAFT FÜR DIE ENTWICKLUNG MEDIZINISCHER TECHNOLOGIEN [DE/DE]; Hans-Riedl-Strasse 7, 85622 Feldkirchen (DE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): YOUSSEFI, Gerhard [DE/DE]; Reichardtstrasse 1, 84028 Landshut (DE). MORITZ, Friedrich [DE/DE]; Drächselstrasse 4, 81541 München (DE).

(81) Designated States (national): AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK (utility model), SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

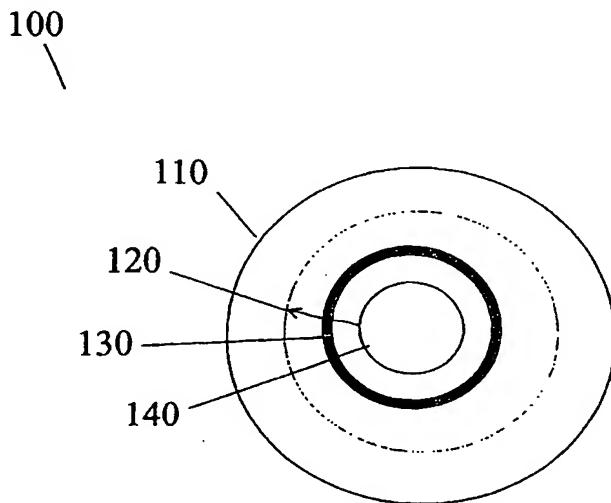
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

(54) Title: MYOPIA CORRECTION ENHANCING BIODYNAMIC ABLATION



WO 2004/002382 A1

(57) Abstract: This invention is directed to a method for providing a LASIK or a LASEK myopia vision correction, and to a medium that has stored therein an instruction for directing a laser vision correcting laser platform to deliver a controlled biodynamic ablation according to the invention. A known biodynamic response of the eye is induced by performing a controlled laser ablation in a cornea of the eye outside of an optical zone for the nominal ablation in a laser vision correction surgery. An ablation ring, or portion thereof, outside of the optical zone produces a biodynamic flattening of the central region of the cornea which in turn provides for a decreased depth of volumetric ablation to correct a myopic refractive defect of the eye. Such controlled biodynamic flattening may provide the opportunity for laser vision correction in patients whose corneas would otherwise be too thin post-operatively to warrant laser vision correction.